

CPME0440916

## Patent Office of the People's Republic of China

Address : Receiving Section of the Chinese Patent Office, No. 6 Tuchieng Road West, Haidian District, Beijing, Postal code: 100088

Applicant	SAMSUNG SDI CO., LTD		Seal of Examiner	Date of Issue
Agent	China Patent Agent (H.K.) Ltd.			December 22, 2006
Patent Application No.	200410032488.2	Application Date	April 8, 2004	Exam Dept.
Title of Invention	SECONDARY BATTERY			

*First Office Action*

1. ☒ Pursuant to the provision of Article 35 (1) of the Chinese Patent Law, the examiner made an examination as to substance of the captioned patent application for invention upon the request for substantive examination filed by the applicant on \_\_\_\_\_.
- ☐ Pursuant to the provision of Article 35 (2) of the Chinese Patent Law, the Chinese Patent Office has decided to conduct on its own initiative an examination as to substance of the captioned patent application for invention.
2. ☒ The applicant requests taking the filing date, 2003.5.21, at the KR Patent Office, the filing date, \_\_\_\_\_, at the \_\_\_\_\_ Patent Office, the filing date, \_\_\_\_\_, at the \_\_\_\_\_ Patent Office as the priority date of the present application.
- ☒ A copy of the first filed patent application certified by the receiving organ of the initial country of filing has been submitted by the applicant.
- ☐ A copy of the first filed patent application certified by the receiving organ of the initial country of filing has not been submitted by the applicant. Pursuant to the provision of Article 30 of the Chinese Patent Law, no priority right shall be deemed to have been claimed.
3. ☐ The applicant filed amended application document(s) on \_\_\_\_\_ and \_\_\_\_\_.
- ☐ Examination has confirmed that \_\_\_\_\_ filed on \_\_\_\_\_ cannot be accepted, \_\_\_\_\_ filed on \_\_\_\_\_ cannot be accepted, as the above amendment(s) ☐ is/are not in conformity with the provision of Article 33 of the Chinese Patent Law.
- ☐ is/are not in conformity with the provision of Rule 51 of the Implementing Regulations of the Chinese Patent Law.
- ☐ For the specific reason that the amendment(s) cannot be accepted, see the text of

the Office Action.

4. ☒ The examination is conducted in the light of the original application document(s)  
☐ The examination is conducted in the light of the following application document(s):  
in the original application documents submitted on the filing date:  
Claim(s) \_\_\_\_\_, page(s) \_\_\_\_\_ of the description, Figure(s)  
of the drawing(s); Claim(s) \_\_\_\_\_, page(s) \_\_\_\_\_ of the description,  
Figure(s) \_\_\_\_\_ submitted on \_\_\_\_\_; Claim(s) \_\_\_\_\_, page (s)  
of the description, Figure(s) \_\_\_\_\_ submitted on \_\_\_\_\_  
☐ Abstract of the description submitted on \_\_\_\_\_.
5. ☐ The present Office Action has been prepared without a search having been conducted.  
☒ The present Office Action has been prepared with a search having been conducted.  
☒ The following reference document(s) is/are cited in this Office Action (its/their serial number(s) will, continue to be used throughout the examination procedure):

No.	Number or Title of Document	Date of Publication (or filing date of interfering application)
1	JP11-96987A	(Date) 1999.4.9
2		(Date)
3		(Date)
4		
5		
6		

6. The concluding comments of the examiner are:

- ☐ On the description:  
☐ The content of the application comes within the scope where no patent right is granted as provided in Article 5 of the Patent Law.  
☐ The description is not in conformity with the provision of Article 26(3) of the Patent Law.  
☐ The drafting of the description is not in conformity with the provision of Rule 18 of the Implementing Regulations.
- ☒ On the claims:  
☐ Claim comes within the scope where no patent right is granted as provided in Article 25 of the Patent Law.  
☐ Claim is not in conformity with the definition of invention in Rule 2(1) of the Implementing Regulations.  
☒ Claim 1, 3, 8, 9 does not possess novelty as provided in Article 22(2) of the Patent Law.  
☒ Claim 2, 10, 11 does not possess inventiveness as provided in Article 22(3) of the Patent Law.  
☐ Claim \_\_\_\_\_ does not possess practical applicability as provided in Article 22(4) of the Patent Law.

- ☐ Claim \_\_\_\_\_ is not in conformity with the provision of Article 26(4) of the Patent Law.
- ☒ Claim 1, 14, 27 is not in conformity with the provision of Article 31(1) of the Patent Law.
- ☐ Claim \_\_\_\_\_ is not in conformity with the provisions of Rule 20 of the Implementing Regulations.
- ☐ Claim \_\_\_\_\_ is not in conformity with the provision of Article 9 of the Patent Law.
- ☐ Claim \_\_\_\_\_ is not in conformity with the provision of Rule 23 of the Implementing Regulations.

For specific analyses of the above concluding comments, see the text of this Office Action.

7. In view of the above concluding comments, the examiner holds that:

- ☐ The applicant should amend the application document in accordance with the requirements raised in the text of this Office Action. The amended document(s) should be submitted in duplicate and should conform to the provisions of Article 33 of the Patent Law and Rule 51 of the Implementing Regulations of the Chinese Patent Law.
- ☒ The applicant should expound in his Observations the reasons why the captioned patent application is patentable and amend the places not conforming to regulations as pointed out in the text of the Office Action, otherwise it would be impossible for the patent right to be granted.
- ☐ The captioned patent application contains no substantive content for which the patent right may be granted, thus if the applicant has not advanced his reasons or has not done so adequately, the application will be rejected.

8. The applicant should pay attention to the following matters:

- (1) In accordance with the provision of Article 37 of the Patent Law, the applicant should submit his/its Observations within **four** months from the date of receipt of this Office Action; if, without any justified reason, the time limit for making response is not met, the application will be deemed to have been withdrawn.
- (2) The amendments made by the applicant to his application should conform to the provision of Article 33 of the Patent Law, the amended text should be in duplicate and the format should conform to the relevant provisions of the Guidelines for Examination.
- (3) The applicant's Observations or amended text should be mailed or presented to the Receiving Section of the Chinese Patent Office. Document not mailed or presented to the Acceptance Section have no legal force.
- (4) Without making an appointment, the applicant and/or agent may not come to the Chinese Patent Office to hold an interview with the examiner.

9. This Office Action consists of the text portion totalling 2 page(s) and of the following annex(es):

- ☒ 1 duplicate copies of the reference document(s) cited totalling 4 page(s).
- ☐
- ☐

Your Ref: SD-20112-CN

Our Ref: CPME0440916

### **Text of the First Office Action**

Application number: 2004100324882

Upon examination, the Examiner's comments are hereby made as follows:

#### **( I )**

1. Claim 1 claims a secondary battery. Reference document 1 has disclosed a lithium secondary battery (a secondary battery) (see paragraphs 0017 and 0029 of the description and Figs.1 and 2) comprising an electrode unit 12 having a positive electrode (equivalent to the first electrode plate), a negative electrode (equivalent to the second electrode plate) and a separator interposed therebetween; a positive electrode tab 15 and a negative electrode tab 16 respectively extending from the positive electrode and negative electrode; a battery can 1 to accommodate the electrode unit 12 and an electrolyte; a cap plate 1a adapted to seal the battery can and having an electrolytic solution charge portion 2. Besides, the charge portion 2 is equivalent to the electrolytic solution inlet in the present application. It can be seen from Fig.2 that the charge portion 2 has an area on one surface of the cap plate different from that on another surface of the cap plate.

Thus, it can be seen that reference document 1 has disclosed the technical solution of claim 1. Besides, reference document 1 and the present application are of the same technical field, intended to solve the same technical problem, and capable of producing the same technical effect. Therefore, claim 1 is non-novel under Article 22.2 of the Patent Law.

2. Although reference document 1 has not disclosed the additional technical feature of claim 2, it is very conceivable on the part of those skilled in the art to manufacture the electrolyte solution inlet to has an area on one surface of the cap plate different from that

on another surface of the cap plate in order to better charge the electrolytic solution into the battery. Therefore, when the referred claim 1 is non-novel, it is obvious to those skilled in the art to obtain the technical solution claimed in claim 2 on the basis of reference document 1. For this matter, claim 2 does not have any prominent substantive features, nor represents a notable progress and is non-inventive under Article 22.3 of the Patent Law.

3. Reference document 1 has disclosed that the charge portion 2 has an area on a surface facing the outside of the can greater than that on a surface facing the inside of the can. Therefore, the additional technical feature of claim 3 has already been disclosed. Besides, the charge portion 2 has a concave slopping toward the inside of the can, which it is equivalent to have disclosed the technical feature of claim 8, namely the electrolytic solution inlet has a slopping cross-section. In addition, the charge portion has a bottom wall forming the concave 3, and the bottom wall has an electrolytic solution charge port 5. It can be seen from Fig.2 that the charge portion has a stepped portion recessed to a predetermined depth in the neighborhood of the charge portion. Therefore, the additional technical feature of claim 9 has been disclosed. For this matter, when the claims to which claims 3, 8 and 9 refer are non-novel, claims 3, 8 and 9 are non-novel under Article 22.2 of the Patent Law, either.

4. The step of the charge portion 2 disclosed in reference document 1 has a depth of 2 mm. Although reference document 1 has not disclosed the scope of protection claimed in claim 10, it is very conceivable on the part of those skilled in the art to adjust the depth as 0.1 to 0.5 mm on the basis of reference document 1. Therefore, when the referred claim is non-novel, it is obvious to obtain the technical solution claimed in claim 10 on the basis of reference document 1. For this matter, claim 10 does not have any prominent substantive features, nor represents a notable progress and is non-inventive under Article 22.3 of the Patent Law.

5. Reference document 1 has disclosed that the positive electrode tab (equivalent to the first electrode tab) is electrically connected to a positive electrode terminal 17

(equivalent to the terminal pin) (see paragraph 0029).

Although reference document 1 has not disclosed the other additional technical features of claim 11, it is of the publicly known general knowledge in the art to insulate the terminal pin from the cap plate and to weld the second electrode tab to the cap plate at a position between the terminal pin and the electrolytic solution inlet. Therefore, when claim 1 to which claim 11 refers is non-novel, it is obvious to those skilled in the art to obtain the technical solution claimed in claim 11 on the basis of reference document 1 in combination with the publicly known general knowledge in the art. For this matter, claim 11 does not have any prominent substantive features, nor represents a notable progress and is non-inventive under Article 22.3 of the Patent Law.

## (II)

1. The same technical features of independent claims 1, 14 and 27 lie in the following: a secondary battery comprising an electrode unit, can and a cap plate. Referring to the foregoing comments, when claim 1 is non-novel with respect to reference document 1, the aforesaid same technical features do not form the special technical features. In addition, the battery having an insulating plate and the first electrode tab connecting the terminal pin insulated from the cap plate are of the publicly known general knowledge in the art. Therefore, the special technical features of claim 14 lie in the following: the second electrode tab is welded to the cap plate at a position opposite to the electrolytic solution inlet with respect to the terminal pin.

The special technical features of claim 27 lie in the following: the electrolytic solution is arranged to overlap the insulating plate, and an injection hole corresponding to the electrolytic solution inlet is arranged in the insulation plate.

Thus, it can be seen that claims 1 and claim 14 and claim 27 do not have any same or corresponding special technical features. Therefore, they are not technically interrelated, nor have unity as provided for in Article 31.1 of the Patent Law.

For the above reasons, the present application based on the current text cannot be granted the patent right yet. If the applicant makes amendments to the patent application

documents according to the comments made herein to overcome the existing defects, the present application is likely to be granted the patent right. Besides, when filing the amended documents, the applicant should also file a copy of the parts of the original to which amendments are related and on which any addition, deletion or substitution should be marked out. The amendments to the application documents shall comply with the provisions of Article 33 of the Patent Law and may not go beyond the scope of the disclosure contained in the original description and claims.



# 中华人民共和国国家知识产权局

邮政编码: 100032 北京市西城区金融街 27 号投资广场 B 座 19 层 中国专利代理(香港)有限公司 章社泉		发文日期
申请号: 2004100324882		
申请人: 三星 SDI 株式会社		
发明创造名称: 蓄电池		

LIU

## 第一次审查意见通知书

CPME0440916

- ☒ 应申请人提出的实审请求, 根据专利法第 35 条第 1 款的规定, 国家知识产权局对上述发明专利申请进行实质审查。  
☐ 根据专利法第 35 条第 2 款的规定, 国家知识产权局决定自行对上述发明专利申请进行审查。
- ☒ 申请人要求以在:  
KR 专利局的申请日 2003 年 05 月 21 日为优先权日,  
专利局的申请日 年 月 日为优先权日,  
专利局的申请日 年 月 日为优先权日,  
专利局的申请日 年 月 日为优先权日,  
专利局的申请日 年 月 日为优先权日。  
☒ 申请人已经提交了经原申请国受理机关证明的第一次提出的在先申请文件的副本。  
☐ 申请人尚未提交经原申请国受理机关证明的第一次提出的在先申请文件的副本, 根据专利法第 30 条的规定视为未提出优先权要求。
- ☐ 经审查, 申请人于:  
年 月 日提交的 不符合实施细则第 51 条的规定;  
年 月 日提交的 不符合专利法第 33 条的规定;  
年 月 日提交的  
D G MAY 2007
- 审查针对的申请文件:  
☒ 原始申请文件。 ☐ 审查是针对下述申请文件的  
申请日提交的原始申请文件的权利要求第 项、说明书第 页、附图第 页;  
年 月 日提交的权利要求第 项、说明书第 页、附图第 页;  
年 月 日提交的权利要求第 项、说明书第 页、附图第 页;  
年 月 日提交的权利要求第 项、说明书第 页、附图第 页;  
年 月 日提交的说明书摘要, 年 月 日提交的摘要附图。
- ☐ 本通知书是在未进行检索的情况下作出的。  
☒ 本通知书是在进行了检索的情况下作出的。  
☒ 本通知书引用下述对比文献(其编号在今后的审查过程中继续适用):  
编号 文件号或名称 公开日期(或抵触申请的申请日)  
1 JP11-96987A 1999-04-09
- 审查的结论性意见:  
☐ 关于说明书;  
☐ 申请的内容属于专利法第 5 条规定的不授予专利权的范围。

21301  
2002.8



回函请寄: 100088 北京市海淀区蓟门桥西土城路 6 号 国家知识产权局专利局受理处收  
(注: 凡寄给审查员个人的信函不具有法律效力)



## 第一次审查意见通知书正文

申请号：2004100324882

经审查现提出如下审查意见：

### (一)

1、权利要求1要求保护一种蓄电池，对比文件1公开了一种锂二次电池（一种蓄电池）（参见第0017、0029段，图1-2），包括：具有正极（相当于第一电极板）、负极（相当于第二电极板）以及其间隔板的电极单元12，分别从正负极伸出的正极接片15和负极接片16，容纳电极单元12和电解液的电池壳1，和密封电池壳并具有注液部2的盖板1a，并且注液部2具有形成凹部3并在凹部3的最下端有底壁形成注液口5，由此注液部相当于本申请的电解液注入口，参见附图2可知注液部2在盖板的一个表面上具有与盖板的另一表面上不同的面积。

由此可见，对比文件1公开了权利要求1的技术方案，并且与本申请属于相同的技术领域，将解决相同的技术问题，并具有相同的预期效果，因此权利要求1不具有专利法第22条第2款规定的新颖性。

2、虽然对比文件1没有公开权利要求2的附加技术特征，但是对本领域的技术人员来说，为了更好地将电解液注入电池中，将电解液入口制备成朝向壳体内部的表面上具有比朝向外部的表面上具有更大的面积是很容易想到的，因此在所引用的权利要求1不具有新颖性时，在对比文件1的基础上得到权利要求2要求保护的技术方案是显而易见的，权利要求2不具有突出的实质性特点和显著的进步，因此权利要求2不具有专利法第22条第3款规定的创造性。

3、对比文件1公开了注液部2朝向壳体外部表面上比朝向内部表面上具有更大的面积，因此公开了权利要求3的附加技术特征；并且注液部2具有向壳体内部倾斜的凹面，因此相当于公开了权利要求8中的电解液入口具有倾斜截面；另外注液部具有形成凹部3的底壁，以及在底壁具有注液口5，从附图2中可以看出注液部具有在其附近凹进预定深度的台阶部分，因此公开了权利要求9的附加技术特征，在权利要求3、8和9所引用的权利要求不具有新颖性时，权利要求3、8和9也不具有专利法第22条第2款规定的新颖性。

4、对比文件1中公开的注液部2具有的台阶深度为2mm，虽然没有公开本申请权利要求10要求保护的深度，但是本领域技术人员在对比文件1的基础上调整深度为0.1-0.5mm是很容易想到的，因此在所引用的权利要求不具有新颖性时，在对比文件1的基础上得到权利要求10要求保护的技术方案是显而易见的，权利要求10不具有突

出的实质性特点和显著的进步，因此权利要求10不具有专利法第22条第3款规定的创造性。

5、对比文件1公开了正极接片（相当于第一电极接片）与正极端子17（相当于接线柱）电连接（参见第0029段）。

虽然对比文件1没有公开权利要求11的其他附加技术特征，但是在本领域中，将接线柱与盖板绝缘，并将第二电极接片焊接到盖板上的接线柱和电解液注入口之间是本领域技术人员的公知技术，因此在权利要求11所引用的权利要求1不具有新颖性时，在对比文件1的基础上结合本领域技术人员的公知常识从而得到权利要求11要求保护的技术方案是显而易见的，权利要求11不具有突出的实质性特点和显著的进步，权利要求11不具有专利法第22条第3款规定的创造性。

（二）

1、独立权利要求1、14和27的相同技术特征在于：一种蓄电池，包括电极单元、壳体 and 盖板；而参见上述评述，权利要求1相对于对比文件1不具有新颖性时，上述相同的技术特征不能构成特定技术特征，另外在本领域中，电池具有绝缘板以及第一电极接片连接与盖板绝缘的接线柱是本领域的公知技术，因此权利要求14的特定技术特征在于：第二电极片焊接到盖板上的相对于所述接线柱与所述电解液入口相对的位置上；

权利要求27的特定技术特征在于：电解液入口设置成重叠在绝缘板上，对应于电解液入口的注入孔设在所述绝缘板中。

由此可见，权利要求1与14与27不具有相同或者相应的特定技术特征，因此在技术上不相关联，因此权利要求1与14与27不具有专利法第31条第1款规定的单一性。

基于上述理由，本申请按照目前的文本还不能被授予专利权。如果申请人按照本通知书提出的审查意见对申请文件进行修改，克服所存在的缺陷，则本申请可被授予专利权。并且申请人在提交修改文本时应同时提交修改涉及部分的原文复印件，并在该复印件上标注出所作的增加、删除或替换。对申请文件的修改应当符合专利法第三十三条的规定，不得超出原说明书和权利要求书记载的范围。

审查员：武绪丽

代码：A220